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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/628,908 | 07/29/2003 | Kui-Chiu Kwok | 13990 | 8105 |
| 7590 10/25/2005 | | | EXAMINER | |
| Lisa M. Soltis Illinois Tool Works Inc. 3600 West Lake Avenue Glenview, IL 60025 | | | BOECKMANN, JASON J | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 3752 | |

DATE MAILED: 10/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/628,908

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| Applicant(s) | |
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KWOK ET AL.

Examiner

Jason J. Boeckmann

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| Art Unit |
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3752

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 7-29-2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7/29/2003.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

The drawings are objected to because:

- a. The drawings include extra materials such as dimensions and dimension lines; see figure 2 for example.
- b. Figures 8 and 9 each show grooves that are not mentioned in the specification.
- c. It is not clear what groove reference number 24 is pointing to and where that groove is in figures 2 and 4; see “groove” in figures 8 and 9.
- d. The symbols for crosshatching used in the drawing should be consistent with those of Rule 37 CFR 1.84(n). See MPEP § 608.02(ix).
- e. The arrows used in the drawing should be consistent with those of Rule 37 CFR 1.84(r).

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering

of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The drawings are objected to under 37 CFR 1.83(a) because they fail to show:

- a. the "opening through which the pulverulent material is discharged," (page 1, line 31).
- b. "the seal member providing a lumen," (page 2, line 2).
- c. the "first member including a first reducer section including a lumen," (page 2, lines 2-3).
- d. "the lumen which is circular in cross-section," (page 4, line 31).
- e. the "lumen which is circular in cross-section," (page 5, line 3).
- f. "the lumen through seal 26," (page 5, line 7).
- g. "the lumen 28 of the powder delivery tube 14," (page 5, line 15).
- h. the "first converging/diverging section." (page 5, line 18).
- i. "the lumen of reducing section 42," (page 5, line 26).
- j. "the lumen of expanding section 44," (page 5, lines 29-30).

as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended

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replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore the following features must be shown or canceled from the claims:

- a. the opening as described in claim 1, line 3.
- b. the first member including a first reducer section including a lumen described in claim 1, lines 4-5.
- c. the first feature as described in claim 1, line 5
- d. the second member including a first expander section including a lumen described 1, lines 5-6.

- e. the second feature described in claim 1, line 6.
- f. the lumen providing a second reducer section including a lumen and a second expander section including a lumen as described in claim 2.
- g. the lumen of the first reducer section as described in claims 4, 5, 11, line 1.
- h. the lumen of the first expander section as described in claim 4, lines 2-3.
- i. the lumen of the second reducer section as described in claim 8, lines 1-2.
- j. the lumen of the second expander section as described in claims 9, 10 and 12, lines 1-2.

No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an

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application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

Claims 2-13 and 15-23 are objected to because of the following informalities: Applicant is inconsistent on how the invention is claimed. Claims 1 and 14 refer to a "dispenser for dispensing" and the remainder of the claims refer to an "apparatus". Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 2, and 4-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The word "lumen" is not identified in the specification or shown in the drawings. It is unclear as to what the word "lumen" is referring to throughout the indicated claims.

Claims 1 and 3 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The phrases "first member," "first feature," "first

structural component," "second member," "feature," and "second structural component," are not identified in the specification or shown in the drawings. It is unclear as to what the above phrases are referring to throughout the indicated claims.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3-7, 11 and 13 as well as understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Hollstein et al (6,105,886).

Hollstein et al shows a dispenser for dispensing pulverulent material (10) including an opening (41), a conduit (47, 48, 49, 50) including a seal member (49), a first member (48) including a first reducer section (figure 8) and a first feature (the neck that the seal member 49 slides on to), and a second member (50) including a first expander section (figure 8) and a second feature (the neck that seal member 49 slides on to), the first and second features cooperation to define a space for the seal member (49) between the first reducer section and the first expander section (figure 8).

Regarding claim 3, the first member (48) is provided in a first structural component (11) and the second member (50) is provided in a second structural component (17) adapted to be coupled to the first structural component (11), and the seal member (49) sealing the coupling between the first and second structural components. As for claim 4, the lumen of the seal member (49) provides a transition from the cross sectional area of the

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outlet of the first reducer section (48) to the cross sectional area of the inlet of the first expander section (50). Regarding claims 5 and 11, as well as understood, the first reducer section (neck section of member 48) includes a cross-sectional area at an inlet end and a cross-sectional area at an outlet end, the cross-sectional area decreasing uniformly between the two cross-sectional areas (figure 8). Regarding claims 6, 7 and 13, as well as understood, the first expander section (neck section of member 50) includes a cross-sectional area at an inlet end and a cross-sectional area at an outlet end, the cross-sectional area increasing uniformly between the two cross-sectional areas (figure 8).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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Claims 2, 8-10 and 12, as well as understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Hollstein et al (6,105,886) in view of LeCompte (5,704,825).

Hollstein et al shows all aspects of the applicant's invention as set forth in claim 1, but does not show the conduit (47, 48, 49, 50) further including a second reducer section including a lumen and a second expander section including a lumen. However, LeCompte discloses a nozzle including a reducer section (40) and an expander section (32). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to substitute the reducer and expander sections of LeCompte for the outlet device (47) of Hollstein et al in order to discharge an even coat of pulverulent material from the dispenser. This substitution will give Hollstein et al's invention a second reducer and second expander section. Regarding claim 8, as well as understood, Hollstein et al as modified by LeCompte discloses a second reducer section (40) that includes a cross-sectional area at the inlet end and a cross-sectional area at the outlet end, wherein the cross-sectional area decreases uniformly between the two cross-sectional areas. Regarding claims 9, 10 and 12, as well as understood, Hollstein et al as modified by LeCompte discloses a second expander section (32) that includes a cross-sectional area at the inlet end and a cross-sectional area at the outlet end, wherein the cross-sectional area decreases uniformly between the two cross-sectional areas.

Claims 14-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hollstein et al (6,105,886) in view of LeCompte (5,704,825).

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Hollstein et al shows a dispenser for dispensing pulverulent material (10) including an opening (41), a conduit (47, 48, 49, 50) through which the pulverulent material is transported from a source to the opening (41), the conduit including a first reducer section (the neck that the seal member 49) and a first expander section (the neck that seal member 49), but does not show a second reducer section and a second expander section. However, LeCompte discloses a nozzle including a reducer section (40) and an expander section (32). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to substitute the reducer and expander sections of LeCompte for the outlet device (47) of Hollstein et al in order to discharge an even coat of pulverulent material from the dispenser. This substitution will give Hollstein et al's invention a second reducer and second expander section. Regarding claims 15 and 21, Hollstein et al as modified by LeCompte discloses a first reducer section (neck section of member 48) including a cross-sectional area at the inlet end and a cross-sectional area at the outlet end, wherein the cross-sectional area decreases uniformly between the two cross-sectional areas (figure 8). Regarding claims 16, 17, 22 and 23, Hollstein et al as modified by LeCompte discloses a first expander section (neck section of member 50) including a cross-sectional area at the inlet end and a cross-sectional area at the outlet end, wherein the cross-sectional area increases uniformly between the two cross-sectional areas (figure 8). Regarding claim 18, Hollstein et al as modified by LeCompte discloses a second reducer section (40) that includes a cross-sectional area at the inlet end and a cross-sectional area at the outlet end, wherein the cross-sectional area decreases uniformly between the two cross-sectional areas. Regarding claims 19

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and 20, Hollstein et al as modified by LeCompte discloses a second expander section (32) that includes a cross-sectional area at the inlet end and a cross-sectional area at the outlet end, wherein the cross-sectional area decreases uniformly between the two cross-sectional areas.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Jaubertie (6,726,130) shows a dispenser with a reducing section. Buschor (4,802,625) discloses a dispenser for spraying powder with a reducer and expander section.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason J. Boeckmann whose telephone number is (571) 272-2708. The examiner can normally be reached on 7:30 - 5:00 m-f, first Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Scherbel can be reached on (571) 272-4919. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JJB JJG 9-28-05

A handwritten signature in black ink, appearing to read 'D. Scherbel', with a stylized, cursive script.

David A. Scherbel
Supervisory Patent Examiner
Group 3700